

P ***Juniperus communis***

Common Name(s)

Common Juniper, Juniper

How Used

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Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(+)-AFZELICHIN	Fruit	--	--		
0	(+)-BETA-ELEMEN-7-ALPHA-OL	Fruit	--	--		
30	(+)-CATECHIN	Fruit	--	--		
30	(+)-CATECHIN	Leaf	--	--		
0	(+)-EGIGALLOCATECHIN	Fruit	--	--	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
7	(+)-GALLOCATECHIN	Fruit	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	(+)-JUNENOL	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	(-)-EPIAFZELICHIN	Fruit	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
38	(-)-EPICATECHIN	Fruit	--	--		
0	(DL)-MALIC-ACID	Leaf	--	--		
0	1,4-CINEOLE	Fruit	400	400	-0.44111885007210994	
0	1,4-DIMETHYL-CYCLOHEX-1-YL-METHYL-KETONE	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	1,4-DIMETHYL-CYCLOHEX-3-ENYL-METHYL-KETONE	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	1-4-CINEOL	Fruit Essent. Oil	--	--		
0	1-4-CINEOL	Leaf Essent. Oil	--	--		
0	13,14-EPOXY-IMBRICATOLIC-ACID	Plant	--	--		Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	14,15-DIHYDROXY-LABDA-8(17),13(16)-DIEN-19-ACID	Plant	--	--		Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	15-HYDROXY-PENTADECANOIC	Fruit	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	3-ALPHA-15-DIHYDROXY-LABDA-8(17)-TRANS-13-DIENE	Leaf	--	500		
0	3-ALPHA-ACETOXY-ISOCUPRESSIC-ACID	Leaf	--	712.5		
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-12-14-TRIEN-19-OIC-ACID	Leaf	--	75		
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-13-DIEN-15-OIC-ACID	Leaf	--	75		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
1	3-ALPHA-HYDROXYMANOOL	Leaf	--	2350		
0	4-ACETYL-1,4-DIMETHYL-1-CYCLOHEXENE	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite.	1991.
0	4-ETHOXY-P-MENTHEN-1-ENE	Flower	8	78	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
0	5-ALPHA-HYDROXYABIETINIC-ACID	Plant	--	--	Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.	
0	8-ETHOXY-P-CYMENE	Fruit	4	45	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
16	ACETIC-ACID	Fruit	--	9000	1.951794238179258	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	AGATHADIOL	Fruit	--	--		
0	AGATHOLAL	Fruit	--	--		
0	ALLO-BETULIN	Stem	--	--		
0	ALLO-BETULIN	Leaf	--	--		
0	ALLO-BETULIN	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ALPHA,BETA-DIMETHYLSTEROL	Fruit	4	40		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	ALPHA-AMYRIN	Stem	--	--		
3	ALPHA-CADINOL	Fruit	--	--		
0	ALPHA-COPAENE	Fruit	3	33	-0.6445927707079909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-COPAENE	Fruit Essent. Oil	--	--		
0	ALPHA-CUBEBENE	Fruit	4	45	-0.6188885832567323	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-HIMACHALINE	Plant	--	--		
2	ALPHA-HUMULENE	Fruit	19	192	-0.5022919640544935	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-KETO-GLUTARIC-ACID	Leaf	--	--		
0	ALPHA-MUROLENE	Fruit	54	542	-0.13060058780802927	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ALPHA-MUROLENE	Fruit Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Fruit	26	300	-0.4254028775207352	
11	ALPHA-PHELLANDRENE	Essential Oil	--	--		
28	ALPHA-PINENE	Fruit	530	9200	1.683156636347073	
28	ALPHA-PINENE	Fruit Essent. Oil	--	--		
28	ALPHA-PINENE	Essential Oil	--	336000	2.3965523753346103	
28	ALPHA-PINENE	Leaf Essent. Oil	--	--		
3	ALPHA-SELINENE	Fruit	21	210	-0.45885866517954543	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Fruit	16	640	3.1220141023253	
23	ALPHA-TERPINEOL	Fruit	3	40	-0.37559632876532734	
23	ALPHA-TERPINEOL	Essential Oil	--	2000	-0.6844703056368032	
0	ALPHA-TERPINYL-ACETATE	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	ALPHA-THUJENE	Fruit	24	240	-0.37432106883112565	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	ALUMINUM	Fruit	19	61	-0.20577518900264186	
18	AMENTOFLAVONE	Leaf	--	--		
18	AMENTOFLAVONE	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	AMENTOFLAVONE-DIMETHYL-ETHER	Leaf	--	--		
0	AMENTOFLAVONE-TRIMETHYL-ETHER	Leaf	--	--		
0	ANTICOPALOL	Fruit	--	--		
101	APIGENIN	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
3	AROMADENDRENE	Fruit	2	2		
3	AROMADENDRENE	Fruit Essent. Oil	--	--		
112	ASCORBIC-ACID	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
112	ASCORBIC-ACID	Leaf	600	600	-0.3882477425426218	
0	ASH	Fruit	9920	32000	-0.6386766393183354	
20	BENZOIC-ACID	Leaf	--	--		
9	BETA-AMYRIN	Stem	--	--		
0	BETA-CADINENE	Leaf	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
53	BETA-CAROTENE	Fruit	4	12.2	-0.1272182489407809	
0	BETA-ELEMEN-7-ALPHA-OL	Fruit	--	--		
5	BETA-ELEMENE	Fruit	10	100	-0.4297005513117395	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-FENCHENE	Fruit	--	--		
2	BETA-MYRCENE	Essential Oil	--	110000	-0.2906195438526693	
3	BETA-PHELLANDRENE	Fruit	66	660	-0.3586028887711514	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
3	BETA-PHELLANDRENE	Leaf Essent. Oil	--	--		
3	BETA-PHELLANDRENE	Essential Oil	--	--		
3	BETA-PHELLANDRENE	Fruit Essent. Oil	--	--		
13	BETA-PINENE	Fruit	22	580	-0.2792614436195468	
13	BETA-PINENE	Essential Oil	--	25000	-0.1752769464817969	
3	BETA-SELINENE	Fruit	32	32	-1	
3	BETA-SELINENE	Fruit Essent. Oil	--	--		
47	BETA-SITOSTEROL	Fruit	--	--		
13	BETULIN	Fruit	--	--		Jim Duke's personal files.
13	BETULIN	Leaf	--	--		Jim Duke's personal files.
13	BETULIN	Stem	--	--		Jim Duke's personal files.
3	BILOBETIN	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
35	BORNEOL	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.	
35	BORNEOL	Essential Oil	--	--		
0	BORNEOL-ACETATE	Essential Oil	--	4000	-0.7241445887911021	
0	BORNEOL-ACETATE	Fruit Essent. Oil	--	--		
12	BORNYL-ACETATE	Fruit	2	40	-0.7015317621173582	
4	CADINENE	Fruit Essent. Oil	--	--		
4	CADINENE	Fruit	--	--		
102	CAFFEIC-ACID	Leaf	--	--		
102	CAFFEIC-ACID	Fruit	--	--		
0	CALAMENENE	Fruit	71	71	-0.5933257121003137	
28	CALCIUM	Fruit	2632	8490	1.0692774780691343	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	CAMPESTEROL	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
9	CAMPHENENE	Fruit	1	100	-0.3103363418182056	
9	CAMPHENENE	Fruit Essent. Oil	--	--		
9	CAMPHENENE	Essential Oil	--	--		
0	CAMPHOLENE-ALDEHYDE	Essential Oil	--	2000		
0	CAMPHOLENIC-ACETATE	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CAMPHOLENIC-ALDEHYDE	Fruit	1	7		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
41	CAMPHOR	Fruit	1	7	-0.8917009005689489	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
41	CAMPHOR	Essential Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CAR-3-ENE		Essential -- Oil	--		
0	CAR-3-ENE		Fruit Essent. Oil	--	--	
0	CARBOHYDRATES	Fruit	226300	730000	-0.2827855072710454	
31	CARYOPHYLLENE	Fruit	12	120	-0.39246549266153086	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Fruit	15	15	-0.895044555279303	
8	CARYOPHYLLENE-OXIDE	Fruit Essent. Oil	--	--		
0	CATECHOL-TANNINS	Fruit	30000	50000		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
1	CEDRENE	Leaf	12000	36000		
3	CEDROL	Leaf	450	2100		
3	CEDROL	Wood	200	200	-1	
77	CHLOROGENIC-ACID	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
1	CHOLESTEROL	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
24	CHROMIUM	Fruit	1	3.2	-0.0581672201980405	
0	CINEOL	Essential Oil	--	--		
18	CINNAMIC-ACID	Leaf	--	--		
0	CIS-1-ETHOXY-P-MENTH-2-ENE	Fruit	3	30		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-3-ETHOXY-P-MENTH-1-ENE	Fruit	1	3		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-4-ETHOXY-THUJANE	Fruit	3	30		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	CIS-ACONITIC-ACID	Leaf	--	--		
0	CIS-CALAMANENE	Fruit Essent. Oil	--	--		
0	CIS-COMMUNAL	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	CIS-COMMUNIC-ACID	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	CIS-COMMUNOL	Fruit	--	--		
23	CITRIC-ACID	Leaf	--	--		
20	CITRONELLAL	Fruit	160	160	1.1325570680400574	
20	CITRONELLAL	Fruit Essent. Oil	--	--		
15	CITRONELLOL	Leaf	--	--		
2	COBALT	Fruit	4	12.3	0.9539136726283711	
0	COMMUNIC-ACID	Fruit	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
4	COSMOIIN	Fruit	--	--		
1	CUPARENE	Wood	300	300	-1	
0	CUPRESSUFLAVONE	Leaf	--	--		
0	CYCLOPOLY(D-GALACTURONIC-ACID)	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	DEHYDROABIETOL	Fruit	--	--		
8	DELTA-3-CARENE	Fruit	2	20	-0.5797379943407993	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DELTA-3-VARENE	Leaf	--	--		
9	DELTA-CADINENE	Fruit	--	--		
1	DELTA-CADINOL	Fruit	1	1	-1	
14	DEOXYPODOPHYLLOTOXIN	Fruit	--	--		
0	DESOXYPICROPODOPHYLLOTOXIN	Fruit	--	--		
8	DESOXYPODOPHYLLOTOXIN	Fruit	--	--		
0	DL-EPICUBENOL	Wood	--	--		
0	EO	Fruit	6200	40000	-0.042481439666032995	
0	EO	Leaf	--	--		
0	EPIAFZELICHIN	Fruit	--	--		
40	EPICATECHIN	Fruit	--	--		
1	ETHYL-LAURATE	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
1	ETHYL-MYRISTATE	Fruit	1	6	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ETHYL-PALMITATE	Fruit	1	10	-0.6891827096735466	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ETHYL-PALMITOLEATE	Fruit	1	2		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
17	FARNESOL	Leaf	--	--		
0	FAT	Fruit	17360	56000	-0.21352859426457804	
0	FAT	Seed	539000	539000	1.441214427871716	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	FERRUGINOL	Wood	10	10		
61	FERULIC-ACID	Leaf	--	--		
15	FIBER	Fruit	120000	120000	-0.20454875292033714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Fruit	--	120000	-0.26860285043394083	
0	FIBER(DIETARY)	Fruit	--	320000	-0.9715942860730087	
13	FORMIC-ACID	Fruit	1550	5000	1	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
8	FRUCTOSE	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
7	FUMARIC-ACID	Leaf	--	--		
7	FUMARIC-ACID	Fruit	1550	5000	-0.6004154140938881	
62	GALLIC-ACID	Leaf	--	--		
2	GALLO-TANNIN	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	GAMMA-CADINENE	Fruit	16	164	1.8269938624979614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-ELEMENE	Fruit	160	160	1.4137929367070103	
0	GAMMA-ELEMENE	Fruit Essent. Oil	--	--		
0	GAMMA-MUROLENE	Fruit	128	128	-1	
0	GAMMA-MUROLENE	Fruit Essent. Oil	--	--		
11	GAMMA-TERPINENE	Fruit	19	600	-0.540911166794079	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	--		
0	GEIJERONE	Fruit	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.	
5	GERANYL-ACETATE	Fruit	--	--		
2	GERMACRENE-D	Fruit	3	32	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	GINNOL	Fruit	--	--		
7	GLUCOSE	Fruit	--	--	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.	
4	GLUCURONIC-ACID	Fruit	--	--	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.	
4	GLYCOLIC-ACID	Fruit	--	--		
7	HINOKIFLAVONE	Leaf	--	--		
2	HUMULENE	Fruit	102	102	-0.6157187427092596	
0	HUMULENE-OXIDE	Fruit	9	9		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	HUMULENE-OXIDE	Fruit Essent. Oil	--	--		
0	HYPOLAETIN-7-O-BETA-D-GLUCOSIDE	Fruit	--	--		
0	IMBRICATOLIC-ACID	Plant	--	--	Hegnauer, R.	1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
6	IRON	Fruit	5	15	-0.4679872255679544	
0	ISOCRYPTOMERIN	Leaf	--	--		
0	ISOCUPRESSIC-ACID	Leaf	--	2637.5		
0	ISOCUPRESSINIC-ACID	Plant	--	--	Hegnauer, R.	1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	ISOPIMARAL	Fruit	--	--		
2	ISOPIMARIC-ACID	Fruit	--	--		
0	ISOPIMAROL	Fruit	--	--		
3	ISOQUERCETIN	Fruit	--	--		
22	ISOQUERCITRIN	Leaf	--	--		
22	ISOQUERCITRIN	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	JUNENE	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	JUNICEDRAL	Fruit	--	--		
0	JUNICEDROL	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	JUNIONONE	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	JUNIONONE	Fruit Essent. Oil	--	--		
0	JUNIPERAPRENOL-14	Leaf	--	--		
0	JUNIPERAPRENOL-15	Leaf	--	--		
0	JUNIPERAPRENOL-16	Leaf	--	--		
0	JUNIPERAPRENOL-17	Leaf	--	--		
0	JUNIPERAPRENOL-18	Leaf	--	--		
0	JUNIPERAPRENOL-19	Leaf	--	--		
0	JUNIPERAPRENOL-20	Leaf	--	--		
0	JUNIPEROL	Wood	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	KILOCALORIES	Fruit	3410	3410	-0.3805452107665679	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	L-ASCORBIC-ACID	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
2	L-LIMONENE	Bark	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	L-MALEIC-ACID	Fruit	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	L-TARTARIC-ACID	Leaf	--	--		
7	LAURIC-ACID	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	LEUCOANTHOCYANIN	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
60	LIMONENE	Fruit	76	910	-0.6196944860922323	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	LIMONENE	Fruit Essent. Oil	--	--		
60	LIMONENE	Essential Oil	--	31000	-0.5586333216571333	
0	LIMONENE-PEROXIDE	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LIMONENE-PEROXIDE	Fruit Essent. Oil	--	--		
0	LINALOL	Plant	--	--		
53	LINALOOL	Plant	--	--		
7	LINALYL-ACETATE	Plant	--	--		
27	LINOLEIC-ACID	Plant	--	--		
27	LINOLEIC-ACID	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	LINOLENIC-ACID	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	LONGIFOLENE	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite.	1991.
21	LUPEOL	Stem	--	--		
65	MAGNESIUM	Fruit	9	30	-0.9723001521392451	
1	MALONIC-ACID	Leaf	--	--		
14	MANGANESE	Fruit	2	6.3	-0.3619961117886394	
2	MANOOL	Leaf	--	87.5		
63	MENTHOL	Fruit	22	22		
63	MENTHOL	Fruit Essent. Oil	--	--		
0	METHYL-CITRONELLOL	Plant	--	--		
0	MYRCECOMMUNAL	Fruit	--	--		
22	MYRCENE	Fruit	110	1800	-0.10348815985421497	
22	MYRCENE	Fruit Essent. Oil	--	--		
22	MYRCENE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	MYRCEOCOMMUNIC-ACID	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
5	MYRTENAL	Fruit	--	--		
5	MYRTENAL	Fruit Essent. Oil	--	--		
0	MYRTENAL-ACETATE	Fruit	--	--		
2	MYRTENOL	Plant	--	--		
0	MYRTENOL-ACETATE	Fruit Essent. Oil	--	--		
3	N-HENTRIACONTANE	Fruit	--	--		
0	N-HEPTACOSANE	Fruit	--	--		
1	N-NONACOSANE	Fruit	--	--		
0	N-PENTATRIACONTANE	Fruit	--	--		
0	N-TRITRIACONTANE	Fruit	--	--		
4	NEPETIN	Leaf	--	--		
0	NEPITRIN	Leaf	--	--		
10	NEROL	Fruit	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
10	NEROL	Fruit Essent. Oil	--	--		
11	NEROLIDOL	Leaf	--	--		
5	NERYL-ACETATE	Fruit	6	60	-0.26098959388736837	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Fruit	4	12	-0.6510092608917062	
0	NONACOSAN-5-10-DIOL	Fruit	--	--		
18	OLEIC-ACID	Plant	--	--		
18	OLEIC-ACID	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	OPLOPANONE	Fruit	--	--		
9	OXALIC-ACID	Leaf	--	--		
25	P-COUMARIC-ACID	Leaf	--	--		
0	P-CYMEN-8-OL	Fruit	1	4	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
16	P-CYMENE	Fruit	48	480	-0.516224768738665	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
16	P-CYMENE	Fruit Essent. Oil	--	--		
0	P-CYMENTOL	Fruit Essent. Oil	--	--		
0	P-CYMOL	Plant	240	240	-0.9534537245333127	
0	P-CYMOL	Leaf Essent. Oil	--	--		
0	P-CYMOL	Essential Oil	--	--		
13	P-HYDROXY-BENZOIC-ACID	Plant	2500	2500	1	
0	P-MENTHA-1,2,4-TRIOL	Plant	--	--		
0	P-MENTHANE	Fruit	2	20		
0	P-MENTHANE	Fruit Essent. Oil	--	--		
0	P-MENTHANE-1-2-4-TRIOL	Fruit Essent. Oil	--	--		

Chemical Plant Part			Low PPM	High PPM	StdDev	Reference	Citation
13	PALMITIC-ACID	Plant	--	--			
13	PALMITIC-ACID	Fruit	--	--		Leung, A. Y. and Foster, S.	1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	PALMITOLEIC-ACID	Seed Oil	--	--			
2	PALMITOLEIC-ACID	Plant	--	--			
24	PECTIN	Fruit	7000	7000	-0.5471395023787067	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	
0	PENTOSAN	Fruit	60000	60000	1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	
4	PHELLANDRENE	Fruit Essent. Oil	--	--			
0	PHENYL-PYRUVIC-ACID	Leaf	--	--			
4	PHOSPHORIC-ACID	Leaf	--	--			
4	PHOSPHORUS	Fruit	279	900	-0.7034597256399827		
14	POTASSIUM	Fruit	2967	9570	-0.7384457440468485		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	PROANTHOCYANINS	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PROTEIN	Fruit	56420	182000	0.9719135979447259	
43	PROTOCATECHUIC-ACID	Leaf	--	--		
176	QUERCETIN	Leaf	--	--		
0	QUERCETIN-3-O-ALPHA-L-ARABINOSYL-GLUCOSIDE	Fruit	--	--		
1	QUINIC-ACID	Leaf	--	--		
0	RESIN	Fruit	80000	100000	0.5011700816956098	
1	RHODOXANTHIN	Leaf	--	--		
15	RIBOFLAVIN	Fruit	0.2	0.6	-0.9443248460470646	
87	RUTIN	Leaf	--	--		
87	RUTIN	Fruit	--	--		
5	SABINENE	Fruit	172	2700	0.3124331852362114	
5	SABINENE	Fruit Essent. Oil	--	--		
5	SABINENE	Essential Oil	--	76000	-0.05757229883510122	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
5	SABINENE	Leaf Essent. Oil	--	--		
0	SANDARACOPIMARAL	Fruit	--	--		
0	SANDARACOPIMAROL	Fruit	--	--		
0	SANDAROPIMARIC-ACID	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	SANTENE	Fruit	--	--		
3	SCIADOPITYSIN	Leaf	--	--		
0	SCUTELLAREIN-7-O-BETA-D-GLUCOSIDE	Fruit	--	--		
60	SELENIUM	Fruit	0.1	0.2	-0.3365919582076448	
0	SELINA-4(14),7(11)-DIENE	Fruit	2	2		
0	SELINAN-4(14)-7(11)-DIENE	Fruit Essent. Oil	--	--		
14	SHIKIMIC-ACID	Leaf	--	--		
4	SILICON	Fruit	1.4	4.5	-0.5938225414098025	
1	SODIUM	Fruit	--	--		
8	STEARIC-ACID	Plant	--	--		
7	SUCCINIC-ACID	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	SUGAR	Fruit	300000	300000	0.7577686224738679	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	SUGARS	Fruit	24800	80000	-0.5539776886973504	
1	SUGIOL	Wood	--	--		
6	SYRINGIC-ACID	Leaf	--	--		
35	TANNIN	Fruit	50000	50000	-0.42929897796396493	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	TERPINEN-4-OL	Fruit	13	1050	-0.19930126187699354	
23	TERPINEN-4-OL	Fruit Essent. Oil	--	--		
23	TERPINEN-4-OL	Leaf Essent. Oil	--	--		
23	TERPINEN-4-OL	Essential Oil	--	21000	-0.4130918835519973	
18	TERPINEOL	Fruit Essent. Oil	--	--		
9	TERPINOLENE	Fruit	18	320	1.3982869520915144	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
9	TERPINOLENE	Fruit Essent. Oil	--	--		
9	TERPINOLENE	Essential Oil	--	--		
31	THIAMIN	Fruit	--	1.2	-0.5290087074554676	
0	THIAMINE	Fruit	0.4	1.2	-1.081392271586632	
0	THUJAN-4-OL	Essential Oil	--	9000		
2	THUJOPSENE	Wood	3700	3700	-1	
4	TIN	Fruit	20	63	-0.1301348957872833	
0	TORULOSAL	Fruit	--	--		
0	TORULOSIC-ACID	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	TORULOSOL	Fruit	--	--		
0	TRANS-3-ETHOXY-P-MENTH-1-ENE	Fruit	1	10		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-4-ETHOXY-PIN-2-ENE	Fruit	7	66		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	TRANS-4-ETHOXY-THUJANE	Fruit	3	30		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	TRANS-ACONITIC-ACID	Leaf	--	--		
0	TRANS-CALAMANENE	Fruit Essent. Oil	--	--		
0	TRANS-COMMUNIC-ACID	Fruit	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	TRANS-SABINENE-HYDRATE	Fruit	1	6	-0.5171765141826495	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-VERBENOL	Fruit	1	12		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRICYCLENE	Fruit	--	--		
22	UMBELLIFERONE	Leaf	--	--		
22	UMBELLIFERONE	Shoot	--	--		
22	UMBELLIFERONE	Fruit	--	--		
24	VANILLIC-ACID	Leaf	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
5	VERBENONE	Essential Oil	--	2000	-1	
0	WATER	Fruit	--	690000	-0.35035084474250255	
2	WIDDROL	Wood	100	100	-1	
1	YLANGENE	Fruit	--	--		
77	ZINC	Fruit	--	--		